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TITLE : MOLDED PRODUCT CONTAINING X-TYPE ZEOLITE, MANUFACTURE AND USE
APPLICATION THEREOF

ABSTRACT : PROBLEM TO BE SOLVED: To easily obtain an X-type zeolite which shows high adsorption capacity and properties with a large pore capacity and superb strength physical properties as a molded product by converting a kaolin-type clay as an added aluminosilicate to a specific X-type zeolite.

SOLUTION: A molded product is manufactured of 90% or more zeolite content comprising 80 wt.% or more low silica X-type zeolite with 1.9-2.1 mol ratio of $\text{SiO}_2/\text{Al}_2\text{O}_3$ and the remainder of X-type zeolite with 2.3-3.0 mol ratio of $\text{SiO}_2/\text{Al}_2\text{O}_3$ and the remainder of binder consisting of a clay mineral having a fibrous unidimensional structure. In this case, the pore volume is 0.2 cc/g or more and the molded product strength as measured by a 'Kiya' hardness tester is 1.5 kgf or more. Thus it is possible to convert a kaolin-type clay added as a binder to the X-type zeolite to increase the net content of zeolite and also increase the adsorption. In addition, the mesopore is dexterously formed using the clay binder to upgrade the adsorption and desorption rate.

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